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Critical issues in implementing low vision care in the Asia-Pacific region

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Two-thirds of the world's population with low vision resides in the Asia-Pacific region. Provision of comprehensive low vision services is important to improve vision-related quality of life (QoL) for people with this condition. This review outlines the critical issues and challenges facing the provision of low vision services in the Asia-Pacific region. The review offers possible strategies to tackle these issues and challenges facing service providers and policy makers in lieu of Vision 2020 strategies in this area. Pertinent findings from the global survey of low vision services and extensive ground work conducted in the region are used; in addition, a discussion on the availability of services, human resources and training, and funding and the future sustainability of low vision care will be covered. In summary, current issues and challenges facing the region are the lack of specific evidence-based data, access, appropriate equipment and facilities, human resources, funding, and sustainability. These issues are inextricably interlinked and thus cannot be addressed in isolation. The solutions proposed cover all areas of the VISION 2020 strategy that include service delivery, human resources, infrastructure and equipment, advocacy and partnership; and include provision of comprehensive care via vertical and horizontal integration; strengthening primary level care in the community; providing formal and informal training to enable task shifting and capacity building; and promoting strong government and private sector partnership to achieve long-term service financial sustainability.

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Low vision is a chronic eye condition defined as "significant vision loss that is not correctable to normal vision with spectacles, contact lenses, or surgical intervention".[1] While the prevalence of blindness overall has decreased a little over the past 10 years, it still remains a public health problem. Recent estimates show that 39 million people in the world are blind and 246 million have low vision.[2] However, excluding uncorrected refractive error and cataract, 18 million people are blind and 50 million have low vision. Close to two-thirds of them are from the Asia-Pacific region.[2]

In the next five decades the number of people aged 60 years and over is estimated to triple and will account for at least a third of the population.[3] Noncommunicable diseases have replaced infectious conditions as the major causes of morbidity and mortality as well as contributing to the growing health care costs.[4] Eye diseases and low vision will add to this problem which means that there will be an escalating growth in the number of people needing low vision services. The reason for this anticipated growth is that causes of low vision are mainly age-related conditions such as age-related macular degeneration and glaucoma.

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Low vision has considerable impact on quality of life (QoL), independence, and social relationships.[5,6] It contributes to reduced mobility, difficulty caring for oneself, increased risk of falls, and hip fractures.[7] There are also psychological implications associated with low vision such as depression and vision-related emotional distress.[8] Low vision has significant economic implications to the individual and to health systems. For example, vision impairment cost Australia nearly AUD$10 billion in 2004.[9] Low vision rehabilitation interventions impart the required skills and strategies for people to remain safe and independent. Low vision care addresses not only vision but also the social, psychological, emotional, functional, and economic consequences of vision loss.[5] However, the current global coverage and availability of low vision care in most countries is <10%.[10]

This paper will illustrate the critical issues and challenges facing the provision of low vision services, particularly in the Asia-Pacific region. The major issues related to the availability of services, human resources and training, and funding and sustainability will be discussed based on the global survey on low vision and other research conducted by our team in the region. Recommendations provided to address these issues and challenges are based on the VISION 2020 strategies to improve low vision care.

Burning Issues

Availability of services

Among 178 (out of 195) countries that responded to a recent global low vision services survey, low vision services were reported to be present in 115 (64%) countries.[10] However, presence of services does not necessarily equate to good coverage of services. Of the 115 countries with low vision services, 39 countries (34%) had ≤ 10% coverage. Furthermore,

22 (19%) countries had coverage between 11% and 50%, and only 8 (7%) countries had coverage >50%. Out of the 27 countries that responded to the survey in the Asia-Pacific region, low vision services were reported to be present in 23 (85%) of them. However, only 5 (22%) countries had coverage >10%.[11] Interestingly, these countries with >10% coverage have a higher percentage of older people and a more urbanized population.[12] This survey also found that the low vision care being provided was mainly monodisciplinary (clinical care or rehabilitation) and located mainly at the secondary and tertiary levels, particularly in developing countries.[10] This is part of the reason as to why there is a poor coverage of services.

The global survey identified that people with low income, residing in rural areas, women, children, having disabilities, ethnic minorities, refugees, and elderly people were more likely to miss out on services.[10] Other major barriers to access are cost, distance to the nearest service, lack of awareness of services that are available, poor or no referral networks, poor communication between clients and health professionals, and having the perception that "nothing more can be done". These findings were further supported by interviews conducted in Fiji and Cambodia in people with vision impairment.[13]

Another issue with access to services is lack of effective referral systems to have a continuity of care. This is mostly due to geographic distribution of services or lack of awareness about low vision services among the eye care professionals.[12] This situation is similar in both developing and developed countries. For example, in Fiji, clinical low vision services are provided only at the public eye hospital in the capital city, Suva. Rehabilitation services are provided through community-based rehabilitation (CBR) program by a nongovernment organization (NGO) only in some parts of the country.[13,14] The CBR workers usually identify the clients with low vision and refer them to the low vision clinic in Suva. But, not all clients access this referral center due to the barriers aforementioned.[13,14]

Another example is from Australia, where the low vision services are not part of the general ophthalmic care and are instead provided by NGOs such as Vision Australia and Guide Dogs. Although these NGOs provide comprehensive low vision care, referrals made at eye hospitals are not effective because the services are not located in the same building/vicinity. Thus, issues such as proximity, transport and costs arise.[15]

These barriers also extend to issues in obtaining low vision devices, such as the stigma associated with using such devices, difficulties in using devices, and long waiting times (especially in rural regions).[10] Poor access to follow-up and lack of training provided for using low vision devices are some of the other factors affecting their usage. They all, in return, affect the outcomes of rehabilitation.

The two key strategies aimed at achieving better coverage and availability of services and at providing comprehensive care for people with low vision are vertical and horizontal integration of low vision care into the existing systems.

An ideal system would be to have low vision services at all levels of eye care. Clients needing complex low vision devices or intense rehabilitation training could be referred from the primary level to secondary and tertiary levels. Clients that have been provided services at secondary and tertiary low vision clinics need not always go back to the clinics for their follow-ups. Rehabilitation and further follow-ups can be provided at the primary level. Follow-ups by primary level personnel will also ensure effective usage of the low vision devices and compliance with the rehabilitation training. However, efficient linkages and referral pathways are a prerequisite for effective outcomes of such a system. For example, in a case study conducted as a part of the global survey, it was identified that the Aravind Eye Hospital in India provides low vision services at its tertiary clinic and also through CBR programs. Since there is an established referral pathway within the hospital's system, there is more of a continuity of low vision care.[11]

However, many of the developing countries in the Asia-Pacific region do not have fully established eye care services at secondary or tertiary levels because the Ministries of health tend to primarily fund basic health needs such as maternal and child health, malaria, and human immunodeficiency virus (HIV). Even though low vision has been included in national eye health care plans in some of these countries, it is still difficult for these governments to fully fund low vision services. Compounding this issue, in most of these countries, there is a lack of reliable prevalence data on vision impairment quantifying the need for low vision services.

One of the ways to improve the availability of services would be through strengthening primary health care. Primary health care has also been proposed as one of the strategies toward achieving the goal 'health for all' as part of the Alma Ata Declaration.[16] Primary low vision care is about establishing first level contact of low vision clients, their families and communities with low vision services, bringing care as close as possible to where people live and work. This could address issues related to long waiting times and unequal distribution of services between urban and rural regions. Basic low vision services such as refraction, simple optical and nonoptical devices, and rehabilitation can be provided at primary eye care centers. Since CBR programs are available in most of these countries, basic low vision, and rehabilitation services can be provided to people with vision impairment within their own communities.

Horizontal integration of health programs is key to the attainment of the Millennium Development Goals.[16,17] Recent studies have demonstrated that multidisciplinary low vision services result in significant improvements in the overall QoL of the individual.[5,18] The global survey on low vision services had identified that the services are being delivered by a broad range of disciplines such as health, education, social welfare, and rehabilitation.[11] Therefore, rather than creating new systems, the overall QOL of the individuals could be addressed by strengthening the links between eye care and existing disciplines. Integration could also potentially lead to improving coverage by reducing the differences in access and use of low vision services between geographical and socio-economic groups.[19]

The World Health Organization (WHO) has recommended in its recently released guidelines that CBR should have five components aimed at improving the inclusion and participation of people with disabilities in their communities, namely health, education, livelihood, social, and empowerment.[20] A case study on a CBR program in Cambodia demonstrated that it is indeed feasible to address all five components at a community level with efficient linkages with multiple sectors in the community.[13] The findings also showed that the CBR program

was effective in addressing clients' needs. This is an example demonstrating the strength of the primary level of low vision care in providing multidisciplinary services and its importance within a health system.

Human resources and training

The global survey has identified two major issues related to human resources in low vision care. First, it was found that the number of low vision specialists providing low vision care is relatively low across most nations. In fact, in most countries, with the exception of a few developed ones, there are fewer than 10 per 10 million for almost all low vision professionals, including rehabilitation officers, specialist teachers, CBR officers, optometrists, mid-level ophthalmic personnel (MLOP), and ophthalmologists.[10] Second, it was identified that most of the developing countries lacked formal training and professional development opportunities in low vision.[10]

To address these issues, task shifting and training could be considered as a strategy to strengthen low vision human resources. Task shifting is the process of delegating tasks to less specialized health workers.[21] Training ophthalmologists and optometrists takes a long time and it is expensive. Moreover, these cadres tend to work in mainly urban regions. The global survey on low vision services also found that ophthalmologists often do not have the time or interest in providing low vision care.[10] Training mid-level ophthalmic personnel such as ophthalmic nurses and vision technicians becomes essential if the low vision human resource needs are to be met. Task shifting could overcome the barrier of reaching people in rural or remote areas, help lower the costs of care, and provide continued client-centerd care in local communities. This strategy could be highly effective particularly in South-East Asia where higher numbers of MLOP and CBR workers exist than ophthalmologists and optometrists.[10] However, it has to be recognized that there is a risk of overloading primary health workers with too many tasks.

Recommendations for training include integrating low vision into existing curricula and increasing the number of places providing training for low vision cadres. Making low vision training a compulsory part of the curriculum for ophthalmologists and optometrists ensures that these personnel have a minimum standard of knowledge in low vision rehabilitation. It would also improve the awareness of the eye care professionals to make appropriate referrals to low vision services. However, it should be ensured that the curriculum is not too theoretical but also practical. Additionally, informal training sessions could be organised as part of conferences or other programs for professional development. Although a longer term option, formal training may not be always possible for all cadres of eye care personnel. Informal training may be a viable alternative in the short-term. Training National Focal Persons is a possible option to improve in-country training facilities and assist in national planning of services.

Funding and sustainability

Historically, services in low vision were established by charities and philanthropic organizations.[10] This is still the case in many countries today. The global survey ascertained that services in over half of the world's countries are funded by NGOs.[10] Although this may have been sufficient in the past, due to the increasing demand for low vision care and the rapidly ageing population, the issue of long-term financial sustainability in the provision of low vision services remains a serious concern. The global survey found that the private and public sectors are highly inter-dependent and that both are required to ensure the future sustainability of low vision services.[10] This is because in some countries, even though physical infrastructure and equipment are provided by nonprofit organizations, issues remain regarding the human resources and facility maintenance for sustainable services.[10]

Community participation is a central principle of the Alma Ata Declaration as well as being a crucial tenant of comprehensive care.[22] Low vision is also part of education, rehabilitation and social welfare. Thus, cross-government collaboration is needed to take ownership of the range of services while working in partnership with private stakeholders. This supports VISION 2020's recommendation to include low vision into National Plans for eye care. Government support may be possible more in developed than in developing countries because of the differences in the priorities, as discussed earlier. However, Pakistan has shown that government ownership is in fact possible as low vision has been included in the National Eye Care Plan and budget resulting in service implementation in each of the four provinces.[23] The government works in partnership with an international NGO, Sight Savers International that provides technical support. There is also integration of services into existing eye care services in hospitals.

Discussion

The issues in the Asia-Pacific region are similar to those in many other parts of the world. While the availability of low vision services seems to be a major challenge for low vision and rehabilitation, it is interlinked with lack of specific evidence-based data, access, appropriate equipment and facilities, human resources, funding, and sustainability. The issues and solutions discussed in this paper cover all areas of the VISION 2020 strategy—service delivery, human resources, infrastructure and equipment, advocacy, and partnership.

The solutions for service delivery need to address the types, location, and coverage of services. Clinical low vision services are needed in tertiary and secondary eye care centers. These are complemented by primary low vision services that can be provided by primary eye care, CBR workers and teachers. Ideally, low vision teams can provide multi-disciplinary services but the linkages between these three levels of services could provide the whole range of low vision care. Importantly, these are needed to provide services in urban and across rural areas and can improve access for both adults and children. It is realistic that at least in the short-term, services could be provided and funded by government and nongovernment agencies.

Inclusion and participation of people with vision impairment in their communities is feasible with CBR programs as clients' families and communities are involved in the rehabilitation program. However, more research is needed to understand the effectiveness of the CBR's multi-sectoral approach proposed by the WHO. To facilitate this, a framework for CBR programs has been recently developed by the Centre for Eye Research Australia containing indicators to plan and evaluate service delivery system, program management, networks, and outcomes of CBR programs.[13] This framework has been field-tested in two different CBR settings in Fiji and Cambodia and was found to be useful to evaluate the strengths and limitations of the two programs.

Existing evidence has clearly shown the gap in the numbers of people trained to provide low vision services. Provision of services does not solely rely on people who practice only in low vision. What is feasible is that low vision is added to the basic or "add-on" training of ophthalmologists, optometrists, nurses, middle-level eye care and primary eye care and rehabilitation workers. Curricula for all cadres of workers are available through the International Council of Ophthalmology.[24]

Integration into existing infrastructure is the preferred means of providing low vision services. This could include state, provincial, and district hospitals, as well as community-based services such as vision centers. Affordable equipment and low vision devices are available from the Low Vision Resource Centre (LVRC) at the Hong Kong Society for the Blind (http://www.hksb.org.hk/en/). The LVRC distributes devices and equipment to over 90 countries in all regions.

Finally, successful advocacy is a key for long-term success of the above recommendations. Strong advocacy is needed to convince the governments to integrate low vision services into existing public health, education, and social systems. In some instances, government policies, specifically about low vision services and rehabilitation, are not defined in the national eye health or ministry of health strategies. It is therefore essential to work closely with governments to advocate the development of national policies and guidelines on low vision interventions as a first step toward addressing this issue. Reliance upon NGO funding is still necessary where governments do not have sufficient national health funds to allocate to the specific low vision services. International stakeholders such as the International Agency for the Prevention of Blindness (IAPB), the International Council for Education of People with Vision Impairment (ICEVI), and the World Blind Union (WBU), who have formed a Vision Alliance to collaborate at global, regional, and national levels on improving services for people with vision impairment, should play an active role in advocating the strengthening of partnerships between NGOs and governments.

With the significant number of the low vision population residing in this region, the increasing aging population and trends toward chronic causes of vision loss, there is an urgent need for substantial improvement in low vision services and to implement viable strategies to improve coverage.

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